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(1)

# ENVIRONMENTAL ASSESSMENT

AD-A219 375

FOR

BANK PROTECTION AND CLOSING DAM  
CONSTRUCTION AT HURRICANE ISLAND  
MISSISSIPPI RIVER POOL 11



US Army Corps  
of Engineers  
Rock Island District

DTIC  
ELECTE  
MAR 15 1990  
S Co B D

JULY 1989

DISTRIBUTION STATEMENT A

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REPLY TO  
ATTENTION OF

CENCR-PD-E

DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING-P.O. BOX 2004  
ROCK ISLAND, ILLINOIS 61204-2004

ENVIRONMENTAL ASSESSMENT  
FOR  
BANK PROTECTION AND CLOSING DAM CONSTRUCTION  
AT HURRICANE ISLAND  
MISSISSIPPI RIVER POOL 11

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Pertinent Correspondence  
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Distribution List

EA-1



Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By <i>per Form 50</i>	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
<i>A-1</i>	

ENVIRONMENTAL ASSESSMENT  
FOR  
BANK PROTECTION AND CLOSING DAM CONSTRUCTION  
AT HURRICANE ISLAND  
MISSISSIPPI RIVER POOL 11

I. Project Purpose and Need.

The purpose of this environmental assessment is to address the effects of placing approximately 5,500 feet of riprap for bank protection and closing dam construction in Pool 11 of the Upper Mississippi River. Alternatives to the proposed action include the No Federal Action alternative, other locations/configurations, and repair of structures without additional riprap bank protection.

The project is expected to be beneficial to maintaining the navigation channel, with no significant impacts to natural, cultural, economic, or social resources. For these reasons, an Environmental Impact Statement (EIS) will not be prepared for this action. Because the proposed action is subject to the provisions of the Clean Water Act, a Section 404(b)(1) Evaluation has been prepared for the project (attached). Section 401 compliance has been discussed with the Wisconsin Department of Natural Resources in a letter dated May 1, 1989. A joint Public Notice has been prepared and is being distributed concurrently with this document. Copies of correspondence relative to this action are included in the attached Pertinent Correspondence.

II. Project Description.

The proposed work addressed in this document involves placing new bank protection and relocating a closing dam in conjunction with maintenance and repair of existing training works (wing dams) in Mississippi River Pool 11, Grant County, Wisconsin (see plates 1 through 3).

The site of proposed riprap placement is located adjacent to the main channel of the Mississippi River at approximate river miles 598.8 to 599.2 (see plate 1). The project site is more commonly known as Hurricane Island and Hurricane Chute. Various Federal and State agencies have requested bank protection in order to reduce erosion on the upstream tip of Hurricane Island. In addition to armoring the island tip, bank protection will be extended down the west side of the island in conjunction with wing dam repairs. The project also involves bank protection of the opposite shoreline of Hurricane Chute extending downstream about 1,100 feet from the root of wing dam No. 12.

An existing closing dam in severe disrepair is near the upstream end of Hurricane Chute. Due to bank erosion, the closing dam roots (bank tie-ins) have been lost. The closing dam has undergone engineering evaluation, and it

has been determined that repair of the structure to its original specifications is not possible without substantially increasing the amount of rock for construction of bank tie-ins or reconstructing the former banks. The location of the closing dam will be moved slightly upstream to take advantage of the proposed bank protection mentioned above.

III. Alternatives. Alternatives to the proposed action include the following:

A. No Federal Action. This alternative was not selected due to authorized responsibility to maintain training works as part of the Nine-Foot Channel Project.

B. Construction in Other Locations or Configurations. This alternative was not selected based on the need to maintain hydraulic conditions associated with the existing training works configuration and the need to tie in the Hurricane Chute closing dam to upstream bank protection.

C. Repair of Existing Structures Without Additional Bank Protection. This alternative was not selected due to the need for bank protection as evidenced by existing erosion at the project location, the consequent loss of hydraulic function of the closing dam, and potential loss of hydraulic function of other training works at the project location.

IV. Affected Environment.

Hurricane Island is a popular local recreation site for boaters. Previously used dredged material placement sites, located along the riverward side of the island, are used for camping, picnicking, and fishing. High flow events in this section of the river have eroded the dredged material placement sites as well as other natural bankline areas. Recreational boaters have written to the Corps of Engineers requesting dredged material placement on Hurricane Island to restore recreational values.

Vegetation on the island is primarily floodplain forest comprised of species such as silver maple (Acer saccharinum), cottonwood (Populus deltoides), willow (Salix sp.), box elder (Acer negundo), and mulberry (Morus sp.).

Wildlife species typically using the area include small mammals. The combination of wooded island and adjacent slough provides habitat for reptiles and amphibians. The mature forest also provides habitat for the northern flicker and other woodpecker species, as well as nesting cavities for owls. The bald eagle is a winter resident and uses large trees on the shoreline of the island as perches. Other birds using shoreline perches include the belted kingfisher and turkey vulture. Wading birds such as great blue herons utilize the slough as a feeding station.

V. Environmental Effects. (Effects of the proposed action on natural and cultural resources are summarized in table EA-1.)

The long-term effect of the project is expected to be beneficial to man-made resources in the area with no significant adverse effect on natural resources.

Wildlife species which may currently use the project area will not be significantly affected by the action. The placement of riprap below the normal water level and extension of bank protection at the root of each wing dam is expected to benefit aquatic resources by increasing substrate diversity and reducing bank caving.

Rock bank protection is not expected to affect terrestrial species currently using the project area.

Closing dam construction is anticipated to significantly reduce the sediment bedload (primarily sand) entering Hurricane Chute and McCartney Lake. This should have an overall beneficial effect on the aquatic system in the area, with no effect to terrestrial organisms.

There were two federally listed threatened and endangered species considered for this project: the bald eagle (Haliaeetus leucocephalus), the Higgins' eye pearly mussel (Lampsilis higginsii), and the fat pocketbook pearly mussel (Potamilis capax).

An eagle nest is located nearby, but is unlikely to be affected by project activities due to project timing. Bald eagles use large trees along the shoreline throughout the area as resting and feeding perches. Over the long term, bank stabilization should serve to prevent the loss of shoreline trees. No such trees would need to be removed for construction of the proposed project. Project construction will take place during early August. Because eagle fledging activity is likely to occur prior to early July, no significant impacts to the bald eagle population are anticipated to result from project activities near the nest area.

Because the substrate through this area is somewhat unstable, as evidenced by the erosional activity, it is unlikely that the area supports any significant mussel fauna including either endangered mussel species. The only report of either species in the area exists from an account of a collection from the Iowa shore containing P. capax. The proposed project is not expected to affect the Higgins' eye or the fat pocketbook pearly mussels.

Minor, temporary impacts to noise levels and air quality due to construction activity may occur as a result of construction and transportation of materials. This may have temporary, adverse effects on users of nearby recreational sites. No long-term significant impacts are anticipated, and no air quality standards should be violated.

TABLE EA-1

Effects of the Proposed Action  
on Natural and Cultural Resources

<u>Types of Resources</u>	<u>Authorities</u>	<u>Measurement of Effects</u>
Air quality	Clean Air Act, as amended (42 U.S.C. 1657h-7, et seq.)	No significant effect
Areas of particular concern within the coastal zone	Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1451, et seq.)	Not present in planning area
Endangered and threatened species critical habitat	Endangered Species Act of 1973, as amended (16 U.S.C. 1531, et seq.)	No significant impacts antici- pated
Fish and wildlife	Fish and Wildlife Coordination Act (16 U.S.C. 661, et seq.)	No significant effect
Floodplains	Executive Order 11988, Flood Plain Management	No significant effect
Historic and cultural properties	National Historic Preservation Act of 1966, as amended (16 U.S.C. 470, et seq.)	SHPO coordination initiated
Prime and unique farmland	CEQ Memorandum of August 1, 1980; Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environ- mental Policy Act	No significant effect
Water quality	Clean Water Act of 1977, as amended (33 U.S.C. 1251, et seq.)	No significant effect
Wetlands	Executive Order 11990, Protection of Wetlands, Clean Water Act of 1977, as amended (43 U.S.C. 1857h-7, et seq.)	Present in plan- ning area; ef- fect anticipated to be negligible
Wild and scenic rivers	Wild and Scenic Rivers Act, as amended (16 U.S.C. 1271, et seq.)	Not present in planning area

Minor, temporary increases in turbidity and levels of suspended sediments would occur during construction activity. No long-term adverse effects to water quality are anticipated. A Section 404(b)(1) Evaluation has been prepared and is attached to this document. Section 401 certification has been requested from the State of Wisconsin and will be obtained prior to construction.

An archeological sample survey with historic documents review for Navigation Pool 11 conducted for the Rock Island District by Great Lakes Archeological Research Center in 1985 failed to identify any previously located archeological sites or historically sensitive locations in the vicinity of the project area. Because no ground modification is proposed, the project will have no effect on any significant historic property. Comments from the Wisconsin State Historic Preservation Officer are solicited by receipt of this document.

Construction of bank protection and the closing dam is expected to have little effect on aesthetic values. No displacement of people or farms will occur, and no change in community cohesion is anticipated. No significant impacts to community and regional growth, property values and tax revenues, or employment and labor force are expected to result from this action. Business and industrial development may be considered to benefit from maintenance of the navigation channel and training works in this section of the river. No significant impacts to life, health, and safety are anticipated. The completed project is likely to slightly increase fishing activity, and future use of the riverward portion of Hurricane Island for dredged sand disposal will attract recreational boaters. Therefore, the project is expected to slightly benefit public recreational facilities and services.

Considered in conjunction with future proposed work in the project area, cumulative effects of the project include bank stabilization, reduced dredging, and slight recreational enhancement.

With no Federal action, no adverse effects would occur from construction, bank caving and sediment input would continue, and no long-term benefits to recreation would be expected. Alternative locations for bank protection and closing dam construction would be anticipated to have impacts similar to the preferred alternative, but would not serve the immediate need for training works maintenance and bank protection.

#### VI. Relationship to Environmental Requirements.

The project will comply with Federal environmental laws, Executive orders and policies, and State and local policies including the Clean Air Act, as amended; the Clean Water Act, as amended; the Endangered Species Act of 1973, as amended; the Federal Water Project Recreation Act; the Fish and Wildlife Coordination Act of 1958, as amended; the Land and Water Conservation Fund Act of 1966, as amended; the National Environmental Policy Act of 1969, as amended; and the National Historic Preservation Act of 1966, as amended.



The project is located on federally owned land and will not result in the conversion of farmland or existing land use plans. This segment of the Upper Mississippi River is not a federally recognized wild or scenic river. The project will not result in any significant change in floodplain storage, and no significant loss of wetlands will occur from project implementation. Therefore, this action will not conflict with the provisions of the Farmland Protection Policy Act of 1981; Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; or the Wild and Scenic Rivers Act of 1968.

#### VII. Coordination.

Coordination has been maintained throughout the planning and design process with the U.S. Fish and Wildlife Service (USFWS) and the Wisconsin Department of Natural Resources. Copies of coordination letters are contained in the Pertinent Correspondence.

Coordination with the U.S. Environmental Protection Agency and the State Historic Preservation Officer (SHPO) is being pursued through distribution of this Environmental Assessment and solicitation of comments.

Wing and closing dam repair work, bank stabilization, and improvement of navigation training works are coordinated through an interagency team referred to as the Committee to Assess Regulatory Structures (CARS). CARS consists of interdisciplinary personnel from the Corps of Engineers and the USFWS. The USFWS ensures that appropriate State natural resources staff are involved in the planning process. CARS activities also are discussed in other forums such as the Fish and Wildlife Interagency Committee (FWIC) and the River Resources Coordinating Team (RRCT). The FWIC has provided recommendations to the Corps for bank stabilization projects throughout Pool 11, including this area.

FINDING OF NO SIGNIFICANT IMPACT  
BANK PROTECTION  
AND CLOSING DAM CONSTRUCTION  
FOR  
HURRICANE ISLAND AND HURRICANE CHUTE

I have reviewed the information provided by this Environmental Assessment, along with data obtained from cooperating Federal, State, and local agencies and from the interested public. Based on this review, I find that construction of the proposed bank protection and closing dam will not significantly affect the quality of the environment. Therefore, it is my determination that an Environmental Impact Statement is not required. This determination will be reevaluated if warranted by later developments.

Alternatives considered along with the preferred action were:

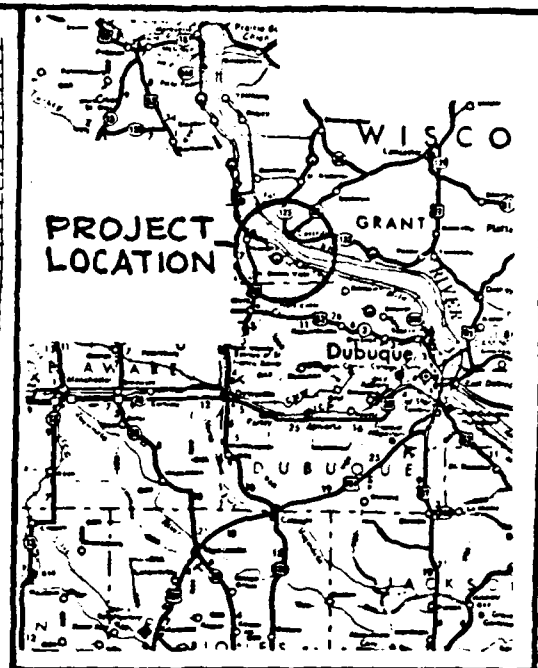
- No Federal Action.
- Closing dam construction at original location.
- Repair of wing dams with no bank protection.

Factors considered in making a determination that an Environmental Impact Statement was not required are as follows:

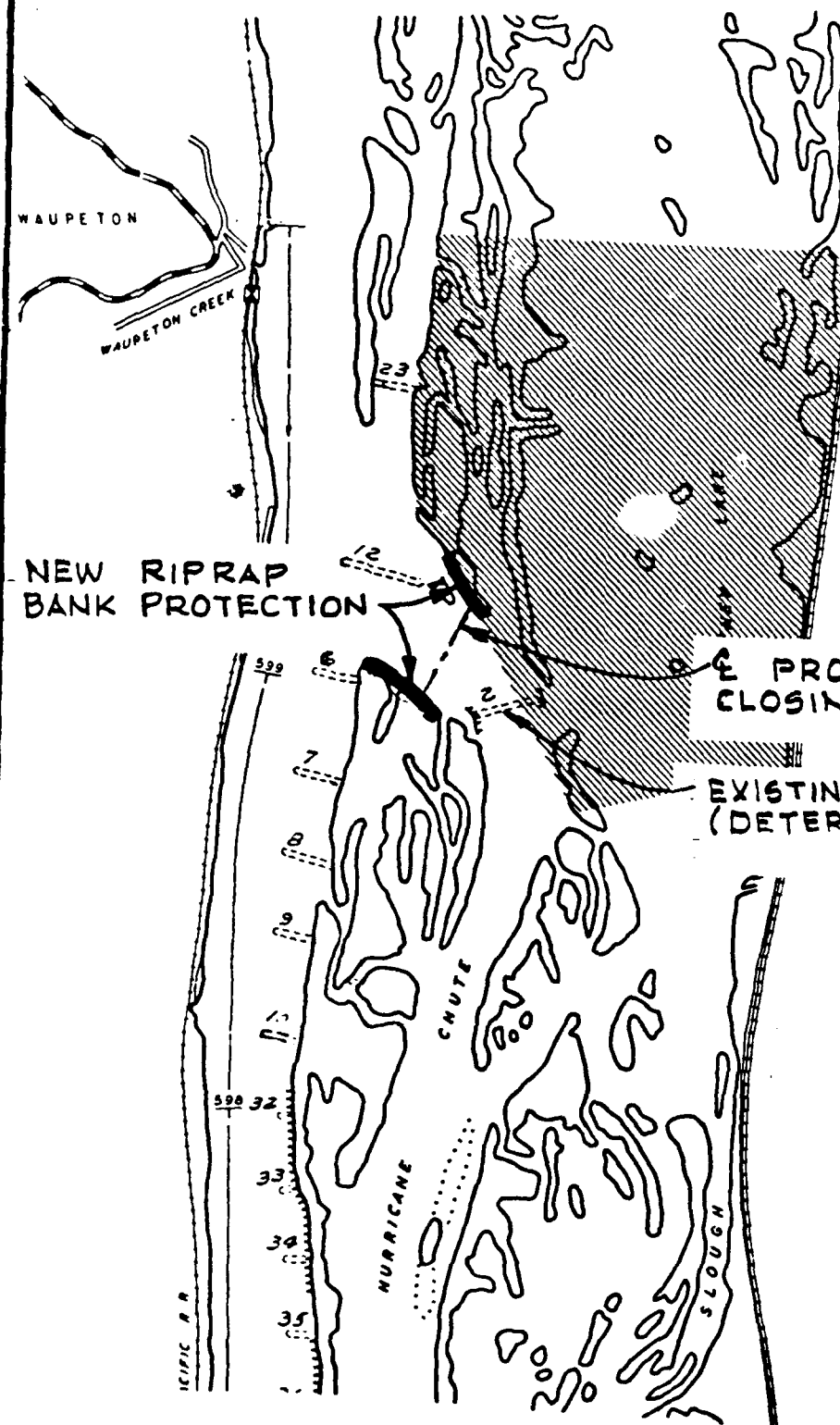
- a. The action is expected to reduce the need for channel maintenance dredging and disposal activities in this section of the river.
- b. Initial loss of and disturbance to aquatic habitat during construction will be offset by increased habitat diversity following project completion.
- c. No significant social, economic, environmental, or cultural impacts are anticipated as a result of this action.

\_\_\_\_\_  
Date

Neil A. Smart  
Colonel, U.S. Army  
District Engineer

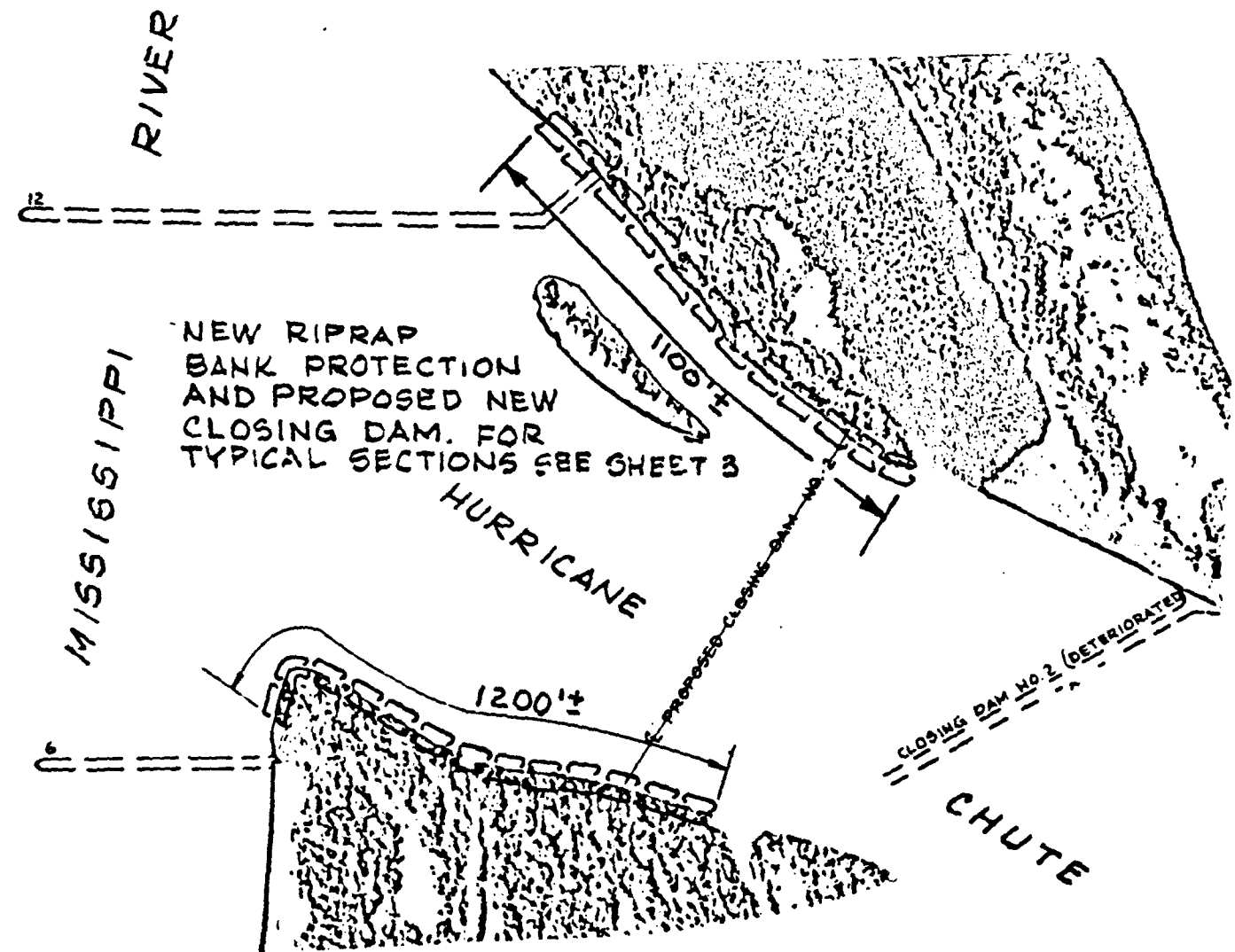


VICINITY MAP

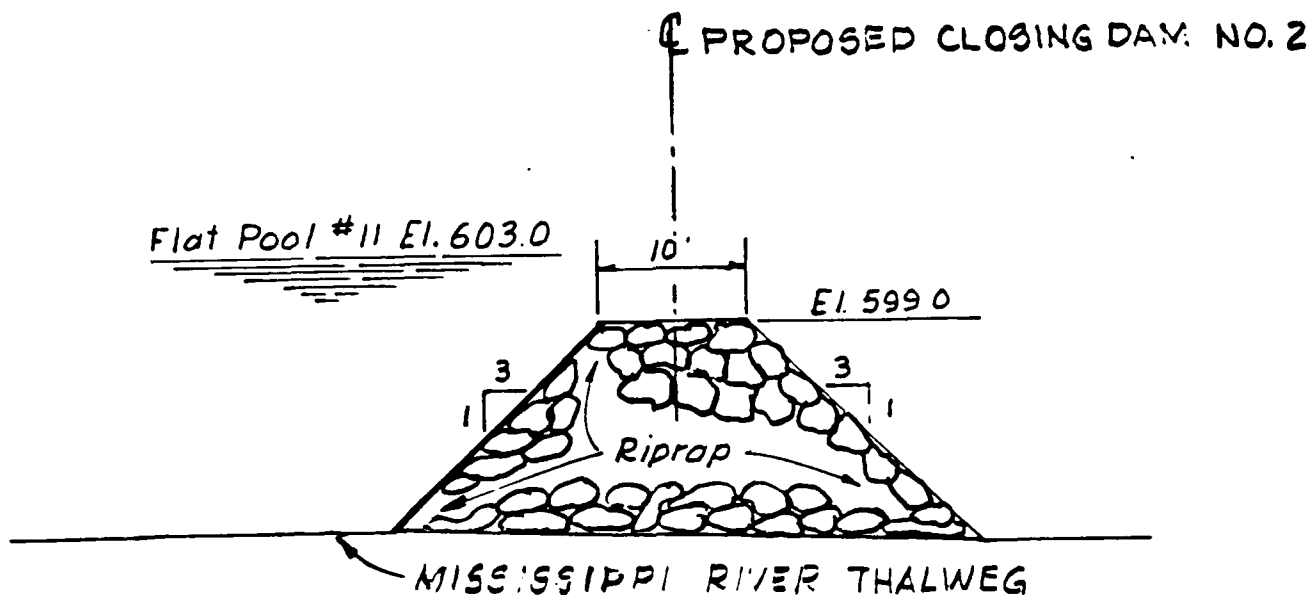


LOCATION MAP

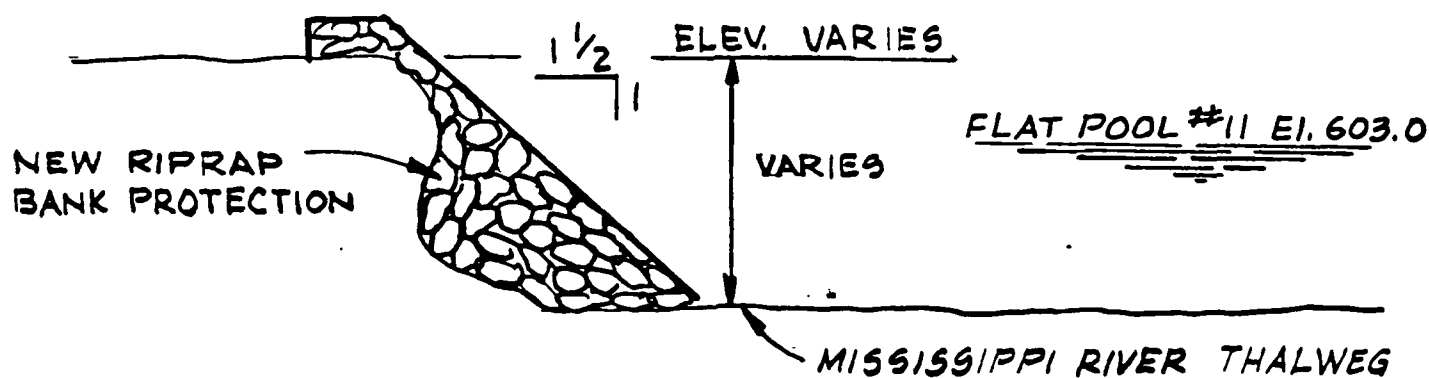
PROJECT DESCRIPTION:  
NEW BANK PROTECTION  
AND  
PROPOSED CLOSING DAM  
LOCATION:  
MISSISSIPPI RIVER  
POOL II  
RIVER MILE 599.0



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 NEW BANK PROTECTION  
 AND  
 PROPOSED CLOSING DAM  
 LOCATION:  
 MISSISSIPPI RIVER  
 POOL II  
 RIVER MILE 599.0



### SECTION THRU PROPOSED CLOSING DAM NO. 2



### SECTION THRU NEW BANK PROTECTION

## TYPICAL SECTIONS

#### PROJECT DATA

LENGTH OF BANK PROTECTION	2,300'
TONS OF RIPRAP	18,000 TONS
LENGTH OF PROPOSED CLOSING DAM	1,000' ±
TONS OF RIPRAP	12,000 TONS

PROJECT DESCRIPTION:  
 NEW BANK PROTECTION  
 AND  
 PROPOSED CLOSING DAM  
 LOCATION:  
 MISSISSIPPI RIVER  
 POOL II  
 RIVER MILE 599.0

PERTINENT CORRESPONDENCE



State of Wisconsin

DEPARTMENT OF NATURAL RESOURCES

State Office Building - Room 104  
3550 Mormon Coulee Road  
La Crosse, Wisconsin 54601  
Telephone: (608)785-9010

Carroll D. Besadny  
Secretary

May 1, 1989

3560-9

Mr. Bob Clevenstine  
Rock Island District  
U.S. Army Corps of Engineer  
Clock Tower Building  
P.O. Box 2004  
Rock Island, IL 61204-2004  
ATTN: Planning Division

Dear Mr. Clevenstine:

SUBJECT: Application for a Permit to Place a Structure on Bed of the  
Mississippi River at Hurricane Island

I have received your inquiry regarding the rock riprap you wish to place on the bed of the Mississippi River. Wisconsin Statutes 30.12 states that a permit from this Department must be obtained prior to the placement of any materials upon the bed of any navigable waterway.

An application for a structure permit is enclosed. Fully complete both sides of each application form. Include the following items in your drawings:

1. A detailed location description of your proposed project.
2. A close-up plan view of the project showing the ordinary high water level and the existing shoreline, the structure dimensions (length, width) and the types of materials to be used.
3. A cross-section diagram showing the slopes of the stream/lake bed and the upland, the ordinary high water level, the structure dimensions (thickness, length) and the depth of the water at the end of the structure.

Include a copy of your deed, lease, property tax statement or other document indicating your riparian status.

Contact your county zoning administrator or municipal zoning official to determine if any local ordinances apply to your project.

Mr. Bob Clevenstine - May 1, 1989

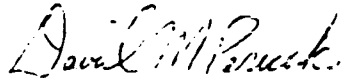
2

The U. S. Army Corps of Engineers may have federal jurisdiction over your project. Please contact the Corps at the following address to determine if a permit is required.

Ms. Mary Marx  
U. S. Army Corps of Engineers  
Post Office Building, Room 219  
425 State Street  
La Crosse, Wisconsin 54601

When all the required information is received in this office, we will begin our determination as to whether or not a permit shall be granted. If you have any questions, please give me a call at (608)785-9010.

Sincerely,



David M. Pericak  
Water Management Specialist

DMP:ph

Enc.

cc: Pam Thiel





# United States Department of the Interior

FISH AND WILDLIFE SERVICE

UPPER MISSISSIPPI RIVER NATIONAL WILDLIFE AND FISH REFUGE

P.O. Box 460,  
McGregor, Iowa 52157  
(319) 873-3423

IN REPLY REFER TO:



June 22, 1989

Robert Clevenstine  
Environmental Analysis Branch  
U.S. Army Corps of Engineers  
Clock Tower Bldg., P.O. Box 2004,  
Rock Island, Illinois 61204-2004

Dear Bob,

I have reviewed the Hurricane Island Bank Protection brief and site drawings that you provided. We have no objection to the proposed bank protection on the head of Hurricane Island and along the base of Wing Dam No. 12.

My apologies for the tardiness in responding.

Sincerely,

John R. Lyons  
District Manager

JRL:dp

# PROOF OF PUBLICATION

STATE OF WISCONSIN,  
COUNTY OF GRANT

ss.

Ralph D. Goldsmith, of said county being duly sworn, deposes and says that he is the owner and managing editor of The Boscobel Dial, a weekly newspaper, printed and published in the City of Boscobel, in Grant County, and that the notice—of which the annexed is a printed copy taken from the paper in which it was published—was inserted and published in said paper one (1) week, the date of the publication being the 22nd day of June, 1989.

*Ralph D. Goldsmith*

Subscribed and sworn to before me, this 24th day of June, A.D., 1989

*Louis A. Goldsmith*  
Notary Public for Grant County.

Printing Fees: \_\_\_\_\_ folios, \_\_\_\_\_ insertions, \$ \_\_\_\_\_  
Certificate \_\_\_\_\_ \$ \_\_\_\_\_  
Total \_\_\_\_\_ \$ \_\_\_\_\_  
Received payment of \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, A.D., 19 \_\_\_\_\_

## NOTICE OF A PROPOSED DNR PERMIT

NUMBER 3-WC-89-2757

The Corps of Engineers, Rock Island District, Clock Tower Building, P.O. Box 2004, Rock Island, IL 61204-2004, has applied to the Department of Natural Resources for a permit to place approximately 18,000 tons of rock riprap along 2,300 feet of shoreline on both sides of the entrance of Hurricane Chute. The Corps also plans to construct a closure dam at the same location. The closure dam will be about 1,000 feet long with the top of the structure at elevation 599.00 feet, which is 4 feet below the flat pool water elevation of 603.00 feet. Approximately 12,000 tons of rock riprap will be used to construct the closure dam. The proposed project would be located in the SE1/4 of Section 5, T2N, R4W, Town of Waterloo, Grant County (River Mile 599.0).

If you want to know more about this project, you should contact Edward J. Bourget at the DNR's Western District office, telephone (715) 839-3730, and ask to see the application and plans or have a copy of the application sent to you. If you do not feel the permit should be granted, write to the Western District office, explaining your objections. Your letter should ask for a public hearing and state that you or your representative will testify at the hearing. A contested case public hearing will be scheduled if the Western District office receives a written objection by the expiration of this notice which is 30 days from the publishing date. Notice of the time and place of the hearing will be provided as required by state law. Unless timely objections are received, the Department may issue its decision without a hearing.

The Department has made an initial decision to grant water quality certification that the project will meet state water quality laws. If a state permit is granted, this decision will become final.

Dated at Eau Claire, Wisconsin, June 19, 1989

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

For the Secretary  
By Edward J. Bourget  
District Water Management Supervisor  
(Published Thursday, June 22, 1989)

CLEAN WATER ACT  
SECTION 404(b)(1) EVALUATION



US Army Corps  
of Engineers  
Rock Island District

## Section 404 (b)(1) Evaluation (40 CFR 230)

Section 9 Township T2N Range R4W Waterway MR Application Number \_\_\_\_\_  
City NONE County GRANT State WI Applicant USAED, Rock Island  
Activity BANK PROTECTION AND CLOSING DAM Date Prepared 19 JUNE 89  
CONSTRUCTION AT HURRICANE ISLAND

### 1. Review of Compliance (230.10[a]-(d))

PRELIMINARY 1/

FINAL 2/

A review of the permit application indicates that:

- a. The discharge represents the least environmentally damaging practicable alternative and, if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in, the aquatic ecosystem to fulfill its basic purpose (if no, see Section 2 and information gathered for EA alternative);
- b. The activity does not appear to (1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of CWA, (2) jeopardize the existence of federally listed endangered or threatened species or their habitat; and (3) violate requirements of any federally designated marine sanctuary (if no, see Section 2b and check responses from resource and water quality certifying agencies);
- c. The activity will not cause or contribute to significant degradation of waters of the United States including adverse effects on human health, life stages of organisms dependent on aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values (if no, see Section 2);
- d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (if no, see Section 3).

YES ☒ NO ☐

YES ☐ NO ☐

YES ☒ NO ☐

YES ☐ NO ☐

YES ☒ NO ☐

YES ☐ NO ☐

YES ☒ NO ☐

YES ☐ NO ☐

### 2. Technical Evaluation Factors (Subparts C-F)

#### a. Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C)

1. Substrate impacts .....  
2. Suspended particulates/turbidity impacts .....  
3. Water column impacts .....  
4. Alteration of current patterns and water circulation .....  
5. Alteration of normal water fluctuations/hydroperiod .....  
6. Alteration of salinity gradients .....

N/A	Not Significant	Significant*
	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

#### b. Biological Characteristics of the Aquatic Ecosystem (Subpart D)

1. Effect on threatened/endangered species and their habitat .....  
2. Effect on the aquatic food web .....  
3. Effect on other wildlife (mammals, birds, reptiles, and amphibians) .....

	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	

#### c. Special Aquatic Sites (Subpart E)

1. Sanctuaries and refuges .....  
2. Wetlands .....  
3. Mud flats .....  
4. Vegetated shallows .....  
5. Coral reefs .....  
6. Riffle and pool complexes .....

	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

#### d. Human Use Characteristics (Subpart F)

1. Effects on municipal and private water supplies .....  
2. Recreational and commercial fisheries impacts .....  
3. Effects on water-related recreation .....  
4. Aesthetic impacts .....  
5. Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves .....

	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	

**REMARKS:** Where a check is placed under the significant category, preparer add explanation on attached sheet.

### 3. Evaluation of Dredged or Fill Material (Subpart G) 3/

- a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. (Check only those appropriate).

1. Physical characteristics .....  
2. Hydrography in relation to known or anticipated sources of contaminants .....  
3. Results from previous testing of the material or similar material in the vicinity of the project .....  
4. Known, significant sources of persistent pesticides from land runoff or percolation .....  
5. Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances .....  
6. Other public records of significant introduction of contaminants from industries, municipalities, or other sources .....  
7. Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities .....  
8. Other sources (specify) .....

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>

List appropriate references (see attached sheet).

- b. An evaluation of the appropriate information in 3a above indicates that there is reason to believe the proposed dredged or fill material is not a carrier of contaminants, or that levels of contaminants are substantively similar at extraction and disposal sites and not likely to result in degradation of the disposal site. The material meets the testing exclusion criteria.

YES ☒ NO ☐

4. Disposal Site Delineation (§230.11(f))

a. The following factors, as appropriate, have been considered in evaluating the disposal site.

- |                                                                                                            |                                     |
|------------------------------------------------------------------------------------------------------------|-------------------------------------|
| 1. Depth of water at disposal site .....                                                                   | <input checked="" type="checkbox"/> |
| 2. Current velocity, direction, and variability at disposal site .....                                     | <input checked="" type="checkbox"/> |
| 3. Degree of turbulence .....                                                                              | <input type="checkbox"/>            |
| 4. Water column stratification .....                                                                       | <input type="checkbox"/>            |
| 5. Discharge vessel speed and direction .....                                                              | <input type="checkbox"/>            |
| 6. Rate of discharge .....                                                                                 | <input type="checkbox"/>            |
| 7. Dredged material characteristics (constituents, amount and type of material, settling velocities) ..... | <input checked="" type="checkbox"/> |
| 8. Number of discharges per unit of time .....                                                             | <input type="checkbox"/>            |
| 9. Other factors affecting rates and patterns of mixing (specify) .....                                    | <input type="checkbox"/>            |

List appropriate references (see attached sheet)

b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable .....

YES ☒ NO ☐

5. Actions to Minimize Adverse Effects (Subpart H)

All appropriate and practicable steps have been taken through application of recommendations of §230.70-230.77 to ensure minimal adverse effects of the proposed discharge. List Actions Taken (see attached sheet) .....

YES ☒ NO ☐

N.B. Return to Section 1 for final stage of compliance review. See also note 3/

6. Factual Determinations (§230.11)

A review of the appropriate information as identified in items 2-5 above indicates that there is minimal potential for short-term or long-term environmental effects of the proposed discharge as related to:

- |                                                                                         |                                         |                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------|
| a. Physical substrate at the disposal site (review sections 2a, 3, 4, and 5) .....      | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| b. Water circulation, fluctuation, and salinity (review sections 2a, 3, 4, and 5) ..... | YES <input type="checkbox"/>            | NO <input type="checkbox"/> |
| c. Suspended particulates/turbidity (review sections 2a, 3, 4, and 5) .....             | YES <input type="checkbox"/>            | NO <input type="checkbox"/> |
| d. Contaminant availability (review sections 2a, 3, and 4) .....                        | YES <input type="checkbox"/>            | NO <input type="checkbox"/> |
| e. Aquatic ecosystem structure and function (review sections 2b and c, 3, and 5) .....  | YES <input type="checkbox"/>            | NO <input type="checkbox"/> |
| f. Disposal site (review sections 2, 4, and 5) .....                                    | YES <input type="checkbox"/>            | NO <input type="checkbox"/> |
| g. Cumulative impact on the aquatic ecosystem .....                                     | YES <input type="checkbox"/>            | NO <input type="checkbox"/> |
| h. Secondary impacts on the aquatic ecosystem .....                                     | YES <input type="checkbox"/>            | NO <input type="checkbox"/> |

7. Evaluation Responsibility

a. This evaluation was prepared by: R. A. CLEVENSTINE

Date: 19 JUNE 89

Position: BIOLOGIST

b. This evaluation was reviewed by: MICHAEL A. COCKERILL

Date: \_\_\_\_\_

Position: CHIEF, ENVIRONMENTAL ANALYSIS BRANCH

8. Findings

- |                                                                                                                                                                                                  |                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| a. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines .....                                                                     | <input checked="" type="checkbox"/> |
| b. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the following conditions (see attached sheet) ..... | <input type="checkbox"/>            |
| c. The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):                                       |                                     |
| 1. There is a less damaging practicable alternative .....                                                                                                                                        | <input type="checkbox"/>            |
| 2. The proposed discharge will result in significant degradation of the aquatic ecosystem .....                                                                                                  | <input type="checkbox"/>            |
| 3. The proposed discharge does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem .....                                                    | <input type="checkbox"/>            |

SIGNATURE

Neil A. Smart, Colonel

Date: \_\_\_\_\_

U.S. Army District Engineer

\*A negative, significant, or unknown response indicates that the permit application may not be in compliance with the Section 404(b)(1) Guidelines.

1/ Negative responses to three or more of the compliance criteria at this stage indicate that the proposed projects may not be evaluated using this "short-form procedure." Care should be used in assessing pertinent portions of the technical information of items 2 a-d below, before completing the final review of compliance.

2/ Negative response to one of the compliance criteria at this stage indicates that the proposed project does not comply with the guidelines. If the economics of navigation and anchorage of Section 404(b)(2) are to be evaluated in the decision-making process, the "short-form" evaluation process is inappropriate.

3/ If the dredged or fill material cannot be excluded from individual testing, the "short-form" evaluation process is inappropriate.

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